

101002, 282

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,746,546 B2  
DATED : June 8, 2004  
INVENTOR(S) : Easterday et al.

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It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Please replace the specification with the new attached specification including Figure 1.

Please replace Formal Drawings 1-5 with the attached drawings.

Column 7.

Line 13, after "the" (first occurrence), delete the numeral "5".

This certificate supercedes certificate of correction issued November 23, 2004,

Signed and Sealed this

Third Day of May, 2005

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A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looping initial "J" and a distinct "D" for "Dudas".

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
Easterday et al.

(10) Patent No.: **US 6,746,546 B2**  
(45) Date of Patent: **Jun. 8, 2004**

(54) **LOW TEMPERATURE NITRIDING SALT  
AND METHOD OF USE**

GB 1105031 3/1965 ..... C23C9/14

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(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(h) by 135 days.

(21) Appl. No.: 10/002,282

(22) Filed: Nov. 2, 2001

(65) **Prior Publication Data**

US 2003/0084963 A1, May 8, 2003

(51) Int. Cl.<sup>7</sup> ..... C23C 8/26

(52) U.S. Cl. .... 148/228; 148/229; 148/240;  
148/242; 148/274

(58) Field of Search ..... 148/228, 229,  
148/240, 242, 274; 252/390

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on the Properties of Nitrocarburized Components", G. Wah  
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(57) **ABSTRACT**

A composition for nitrocarburizing stainless steel parts and  
a method for producing a nitride or hard case on such parts  
using the composition, are provided. The composition  
includes alkali metal cyanate and alkali metal carbonate,  
wherein the cyanate ion is present in a weight percentage of  
greater than 45% and less than 55.2%. The composition is  
fused and maintained between about 750° F. and about 950°  
F. depending upon the type of stainless steel to be treated.  
The workpiece is immersed in the fused bath and left in until  
a satisfactory compound layer or case is formed. With  
austenitic stainless steel, the piece is immersed from about  
four hours to about six hours at temperatures between about  
750° F. and about 950° F., preferably between 750° F. and  
850° F. to maintain corrosion resistance.

With 400 series stainless steel, increased corrosion resis-  
tance is achieved by immersion for between four and six  
hours at 950° F.

**2 Claims, 5 Drawing Sheets**

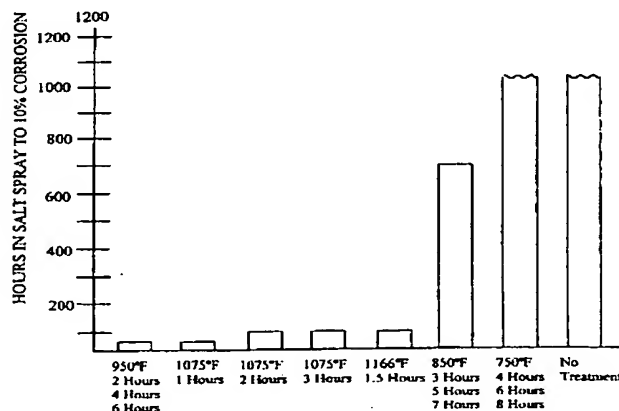


Fig 1

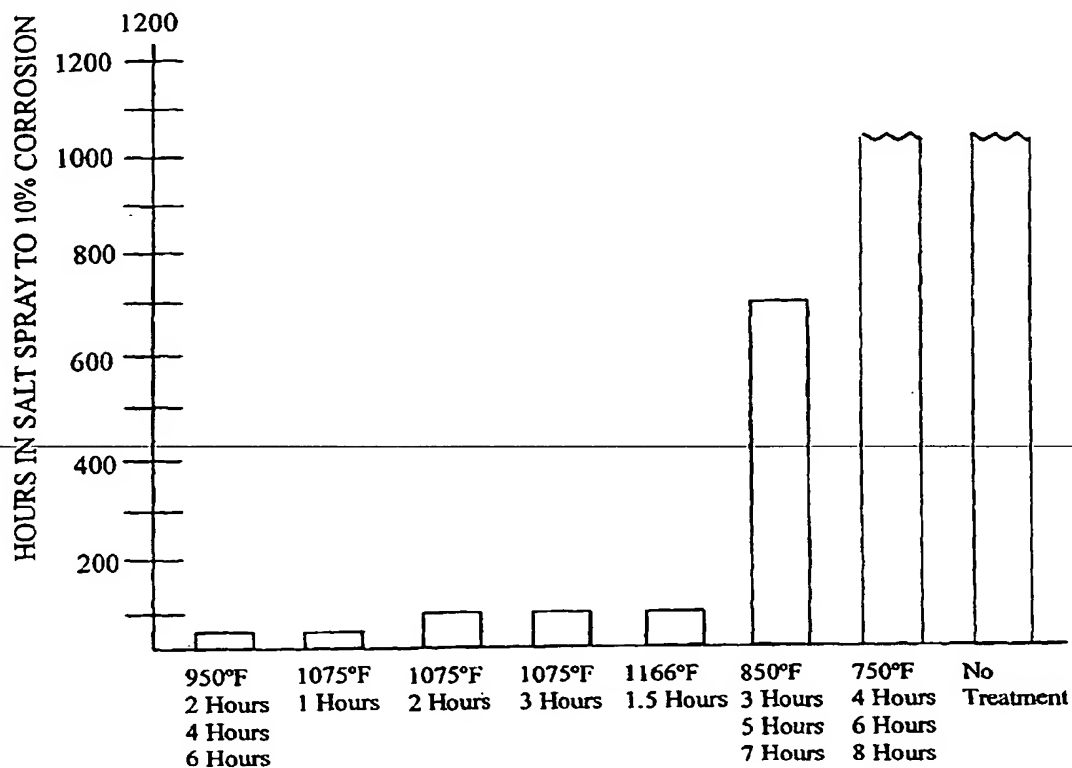


Fig 1

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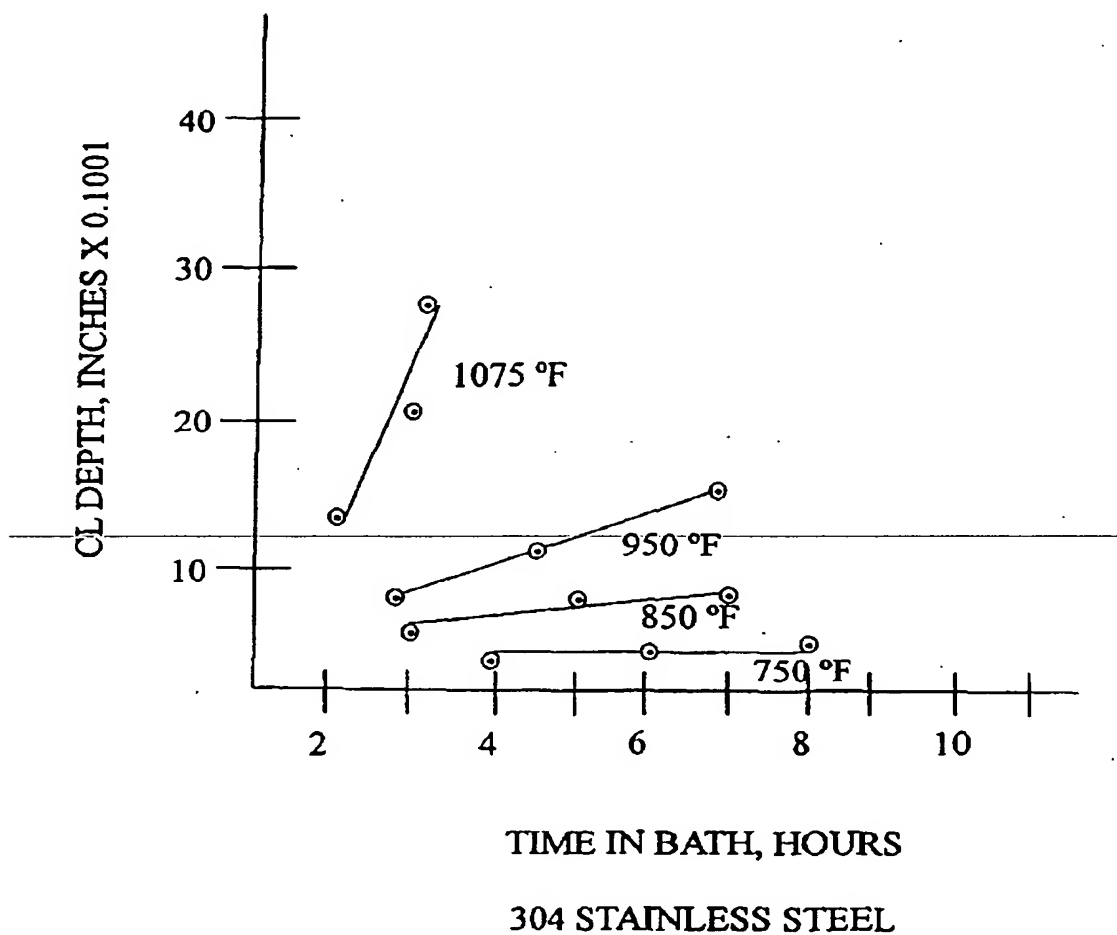


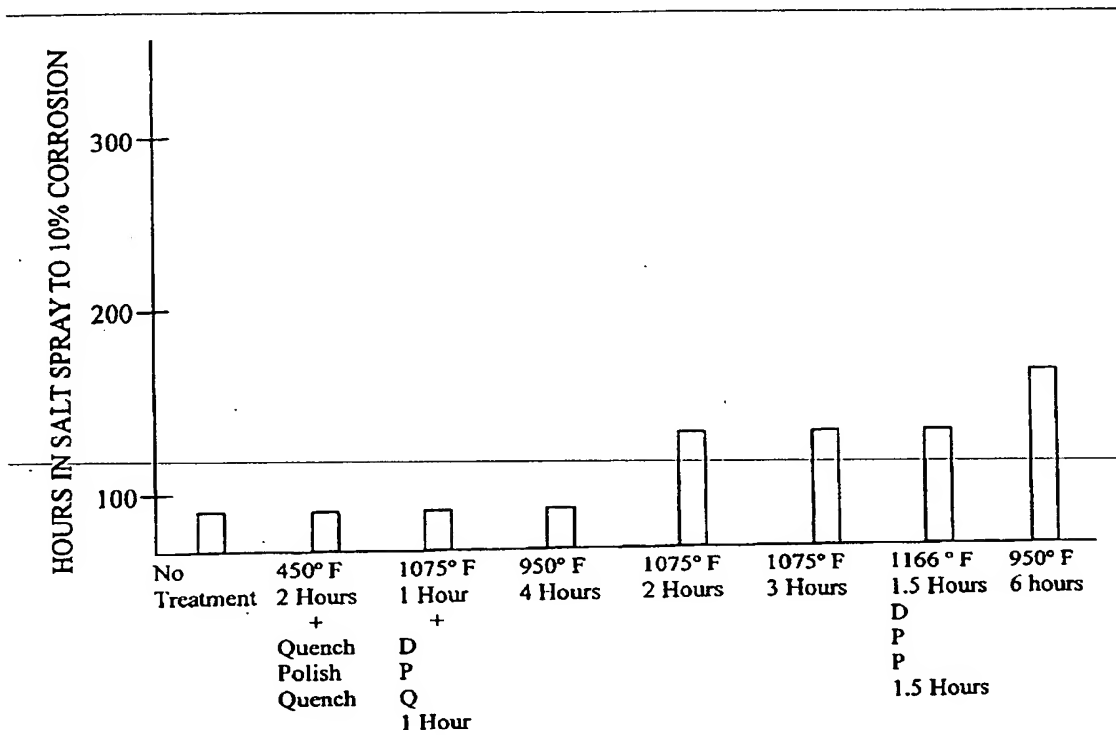
Fig 2

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4/6 STAINLESS STEEL

Fig 3

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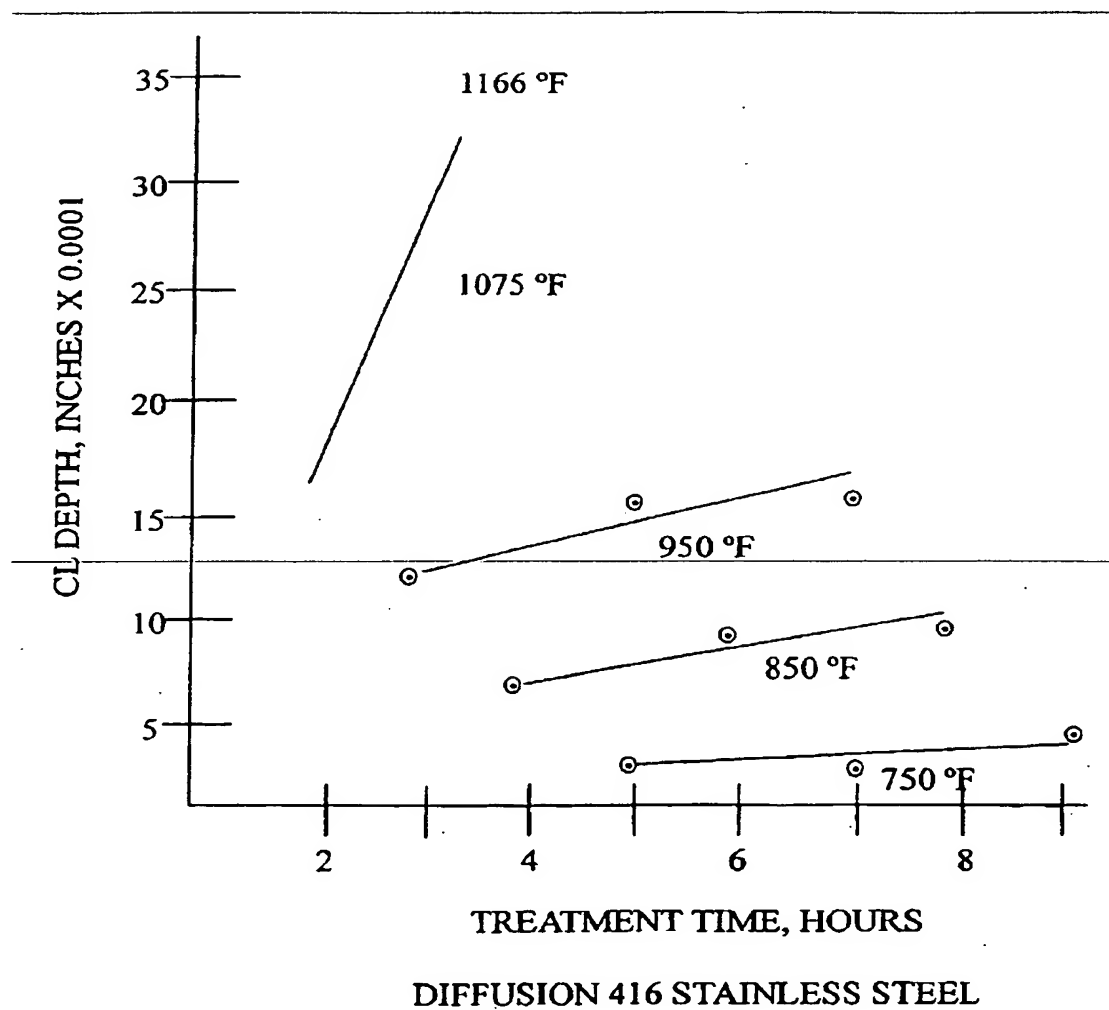


Fig 4

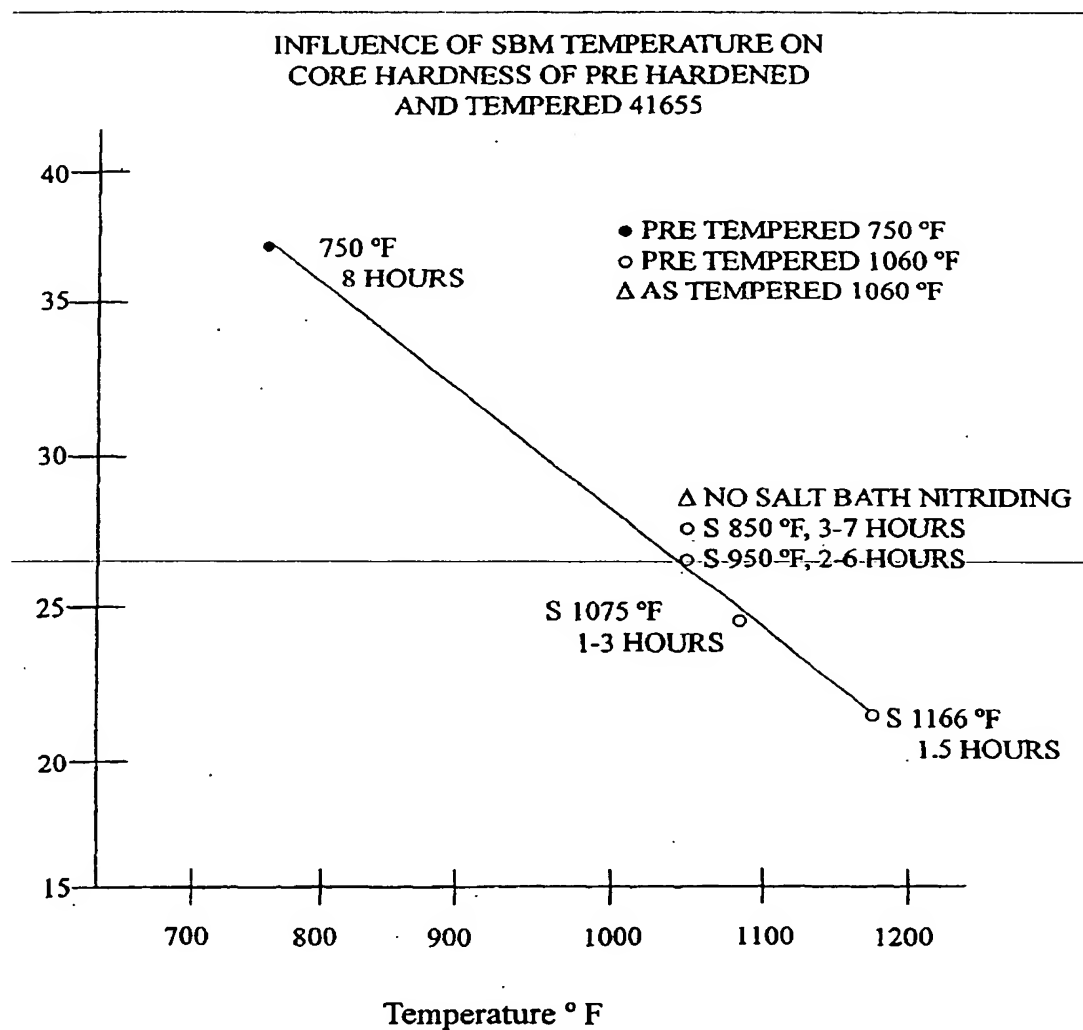


Fig 5